



# The Bankruptcy of Lehman Brothers: Causes, Effects and Lessons Learnt

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## ABSTRACT

The causes of the failure of Lehman Brothers, preventive measures, and recommendations for going forward constitute the subject for discussion in this paper. The bankruptcy of Lehman Brothers in 2008 sent shockwaves through the entire global banking and financial system across numerous and unexpected transmission channels when the price bubble in the US housing market tied to the subprime mortgage market suddenly burst. Actions, which largely relate to the risk return relationship, bad accounting treatment of financial transactions, and loose risk management policies and strategies at Lehman, led the financial conglomerate to its eventual collapse. Global stock markets, individual and corporate investors, and staff of the Firm and its other related businesses bore the brunt of the financial disaster in the form of huge losses, liquidations, job losses, reduction in asset prices and a subsequent global financial crises which could have been prevented. Strong corporate governance structures, robust risk management policies, and constant, effective monitoring and supervision of financial institutions, especially the larger ones by regulatory bodies are therefore highly recommended to ensure against failure of financial institutions.

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## **1. Introduction**

The scars of the 2008 financial meltdown continue to remain visible in the global financial system despite the remarkable strives to avoid its reoccurrence. (Azadinamin, 2013; Duncan, 2012; Le Maux & Morin, 2011). Some analysts have examined this financial nightmare in the context of the failure of Lehman Brothers. In September, 2008, Lehman Brothers Holdings Inc. (LBHI) with assets worth of over US\$600 billion declared bankruptcy (Mawutor, 2014). Approximately, US\$40 to US\$60 billion in collateral assets were frozen during the bankruptcy (Aikman, 2010). Jeffers (2011) as cited in Mawutor (2014), describes the bankruptcy of Lehman as the collapse of the largest financial institution after Enron failure in the early 2000.

This paper analyses the causes of the failure of Lehman Brothers. It also discusses measures that could have been taken in order to prevent the collapse, or at least, minimize the ensuing impacts on the Firm, its investors and the global financial sector at large. Recommendations for going forward are presented in the concluding section of the paper.

## **2. The Rise and Fall of Lehman Brothers**

### **2.1 Background of Lehman Brothers Prior to Bankruptcy.**

The establishment of Lehman Brothers dates back to the 19<sup>th</sup> century. A German immigrant named Henry Lehman established a small shop trading in general merchandise including the sale and purchase of groceries, dry goods and utensils. Upon the inclusion of Henry's two brothers, Emmanuel Lehman and Mayer Lehman in the business in 1850, it was renamed Lehman Brothers. (Fineman & Onaran, 2008). The firm entered into commodities brokerage by trading in cotton in the same year. Lehman Brothers progressed and made significant strides in the securities market in the 19<sup>th</sup> century. For instance, the Firm was mandated as Alabama government's fiscal agent to assist in the sale of the State's bonds in 1867. Lehman Brothers played a key role in the formation of commodities exchanges such as New York Cotton Exchange in 1870 and later the Coffee Exchange and Petroleum Exchange. It was also engaged to service Alabama State's debt, interest payments as well as other obligations (Harvard Business School, n.d). In 1887, the Firm changed its business line from commodities to merchant banking upon becoming member of the New York Stock Exchange.

The Firm's idea of supporting retail businesses became eminent in the early 20<sup>th</sup> century. This was evidenced in the formation of an alliance with Goldman Sachs to finance the emerging retail sector. It resulted in the joint underwriting of retail businesses such as Sears, Roebuck & Co., Woolworth Co., May Department store, Gimbel Brother Inc., and R.H Macy & Co. by the two firms. The Firm also chalked significant milestones in the areas of entertainment, communications, oil and gas exploration and production, electronic and computer technology between the 1920s and 1950s. Notable amongst them are financing of Paramount Pictures, 20<sup>th</sup> Century Fox, Murphy Oil, Radio Corporation of America, as well as underwriting of the first public offering of Digital Equipment Corporations.

Lehman Brothers was instrumental in the provision of innovative methods of financing during the Great Depression in 1929 when the stock market crashed. Due to the depreciation, capital raising on the stock market became practically impossible. Consequently, Lehman Brothers introduced private placement as a new method of raising capital from private individuals and companies.

Lehman Brothers embarked on a massive expansion programme by opening offices in Europe and Asia in the 1960s and 1970s. In 1977, it merged with Kuhn, Loeb & Co, a renowned investment banking firm located in New York which was facing a capital crisis. The firm then became known as Kuhn Loeb Lehman Brothers Inc., and at the time was the fourth largest investment bank. However, the business romance was short-lived due to internal wrangling, resulting in its acquisition by Shearson/America Express in 1984 for US\$360 million. This merger resulted in the creation of Shearson Lehman/America Express.

In 1988, the world witnessed another historical merger when E.F Hutton & Co. agreed to merge with Shearson Lehman/America Express in a US\$1 billion deal at the time, to form Shearson Lehman Hutton Inc. The merger failed to achieve its expected objectives due to amongst other things high labor turnover at Hutton. Consequently, the Hutton brand was abandoned and the business was renamed Shearson Lehman Brothers in 1990. American Express began to break away from banking and brokerage operations and consequently sold Shearson's retail brokerage and asset management business to Primerica. The remaining investment banking and institutional businesses then became Lehman Brothers Holdings Inc., (LBHI), and it had its Initial Public Offer (IPO) in 1994.

LBHI witnessed steadily increased revenues and tremendous increase in human resource base from 8,500 to 28,000 during the period after the IPO in 1994. For three consecutive years (2000 – 2002), the Firm recorded a net income of US\$1 billion. In order to boost its asset management business, the Company acquired Neuberger Berman Inc. for a transaction value US\$3.2 billion in 2003. In 2007, the Firm also became the largest underwriter of mortgage-backed securities.

## **2.2. The Bankruptcy of Lehman Brothers**

The genesis of the bankruptcy of Lehman Brothers dates back to 2007 when the global financial crisis started. The mortgage and other aspects of the Firm's business were severely hit. This resulted in the closure of BNC Mortgage LLC, its subprime – lending unit and elimination of 1,200 jobs in 2007. The share price of the Firm fell by 48% on March 17, 2008 and even though all the loss was recovered the next day due to impressive first quarter financial results, the events that followed, served as a catalyst to its bankruptcy. These events include the:

- Questioning of the credibility of the Firm's earnings report by David Einhorn, an American hedge fund manager;
- Announcement of its first quarterly loss since the IPO;
- Resignation of the President and Chief Executive Officer (CEO) of the Firm;
- Removal of the Chief Financial Officer (CFO);
- Liquidation of US\$6 billion as a result of a loss of US\$2.8 billion in the second quarter of 2008;
- Reporting of US\$3.9 billion third quarter loss and US\$5.6 billion write downs
- Reduction of the Firm's share price by 73% in the first half of September, 2008.

Various efforts aimed at injecting additional capital proved futile. The failure of Barclays Plc and Bank of America Corp. to acquire the Firm, broke the camel's back. Since no firm was ready to take over LBHI, and with no financial support from the Federal Reserve, bankruptcy became inevitable for the Firm. Consequently, LBHI filed for bankruptcy on September 15, 2008 at the US Bankruptcy Court under Chapter 11 bankruptcy. (Murphy, 2008).

The filing for bankruptcy by LBHI trickled down on its affiliates. Lehman Brothers International (Europe) (LBIE), Lehman's U.K broker also filed for administration in the United Kingdom on the same date as LBHI. Four days after September 15, Lehman Brothers Inc.

(LBI), Lehman's U.S. broker-dealer was placed into a Security Investors Protection Act, 1970 (SIPA) as a result of the Firm's inability to obtain sufficient funding and settle trades.

### **2.3. Causes of Lehman Brothers' Failure.**

Several causes have been adduced for the collapse of Lehman Brothers. The Firm's independence on the subprime mortgage market has been cited as the central cause of its collapse (Ferrell, Fraedrich and Ferrell, 2009). Most U.S. banks like Lehman Brothers took advantage of the boom prior to 2007 and extended huge subprime mortgage loans. Subprime mortgages are loans extended to customers who would otherwise not be accepted for credit due to their poor credit score. For players in the subprime mortgage market, the main justification for extending these loans was that although these credits were very risky, the rising prices of mortgages could compensate for any loss through remortgaging in the event of default. This indicated that Lehman Brothers had no idea that the subprime mortgage market could eventually crash. A key feature of these subprime mortgages was the adjustable interest rate. The adjustable mortgage rate as used by Lehman Brothers and other US banks for their subprime mortgages customers allowed a fixed interest rate and then changed to a floating rate in addition to a margin. Customers were blinded by the opportunity to own houses despite their low credit scores as well as lower fixed rates offered at first. However, these borrowers were confronted with numerous difficulties when rates were adjusted to variable rates. Borrowers' capacity to repay their loans were challenged because the variable rates were relatively higher than rates they were previously paying on their loans. When the mortgage prices were still high, Lehman Brothers continued to benefit from higher interest rate as the Firm could remortgage to other borrowers without necessarily being affected. In 2007, Lehman reported a record net profit of approximately US\$4.2 billion. The impact on its share price was also phenomenal as share price rose to all time US\$86.18 in February 2007, resulting in a market capitalization of US\$60 billion. The nightmare was yet to catch up with the Firm, as all strategies were geared towards increasing commitments in subprime mortgages. The Firm took advantage of the high returns and attractiveness of the subprime mortgage market, securitized the subprime mortgages portfolio and sold them to investment banks and hedge funds who thought they could benefit from high returns. The unexpected happened and housing prices began to fall. Investors were also blindfolded by the high returns they were enjoying and the assurances from executives that the low housing prices would not affect the company and investors at large. However, the higher interest rate resulted in a massive default, and coupled with the low prices

of houses, the Firm made huge losses worldwide. The Firm's problems were compounded by the loss of confidence from investors including hedge funds and other investment banks.

What were they thinking? If Lehman's decision to commit more into subprime loans was primarily based on the expectation that housing prices would remain the same or increase, what informed their expectation? Why did the Management continue to implement the same strategy when there was a downturn or did Management of the Firm not have any alternative strategy? Inability of a firm to accurately make projections into long term, may to some extent be pardoned due to variability of uncertainties that may not be easily known. However, short and medium term projections should relatively be done accurately especially with a global firm such as Lehman Brothers who had been in the international banking system for many years. Besides, periodic review of prevailing market conditions between the few years prior to 2007 could have provided them with some indications of what the market would be during the period post 2007, leading to the Firm's filing of bankruptcy in 2008.

Two major blunders therefore can be identified here. The first one is the Firm's inability to make accurate projections into the nearest future and implement counter strategies when market conditions changed. Secondly, the executives might have known these possible changes in the subprime mortgage market conditions but were rather preoccupied with maximizing shareholders' value and in the process enriching themselves through payment of huge bonus. Ross and Gomstyn (2008) revealed that the CEO of Lehman Brothers at the time of the Firm's bankruptcy, Richard Fuld Jr., had since 2000 received a total of US\$484 million in salary, bonuses and stock options, a figure he vehemently defended during the first US Congressional hearing into the financial crunch. He was also quoted to have received over US\$70 million in compensation in 2007. Again, Marshall (2009) recounts the admonishment of Richard Fuld Jr. by Henry Waxman, the then- Chairman of the House Committee on Oversight and Government Reform in the United States that the Company had paid themselves over US\$10 billion through year-end bonuses, stock buybacks, and dividends in spite of the high liquidity risk they were facing at the time. Perhaps, one can say that there was no element of fraud on the part of employees of the Firm in the acquisitions of those emoluments, as it is yet to be proven otherwise. Besides, the emoluments of top management staff such as Richard Fuld Jr were approved by the Board of Directors. Shareholders and investors of the Company might had also been preoccupied counting their returns, such that they failed to scrutinize its performance.

Excessive borrowing resulting in high leverages partly accounted for the bankruptcy of Lehman Brothers. Its leverage ratio by 2007 was a whopping 31:1 (Moscovitz, 2010). This was in contrast with the requirement of U.S regulation of not more than 15:1. The irony was that all the top five banks in United States at the same time had violated the requirement with Bear Stearns, Morgan Stanley and Merrill Lynch, having leverage ratios of 32-34:1. This high leverage had a lot of pressure on Lehman Brothers' liquidity and with the poor performance of the subprime mortgage and the resultant defaults, the liquidity problem compounded. Confidence in the firm waned and its stock price fell by 48%. In order to reduce the leverage and build confidence in the firm, Lehman Brothers raised preferred stock worth US\$4 billion. Though investor confidence was boosted, it was short-lived as its stock price began to drop again when the valuation of the firm's mortgage portfolio was queried by hedge funds. High leverage and its negative impact on the firm's liquidity and stock price contributed significantly to Lehman's demise.

The Company's penchant for using repurchase agreement transactions, what was referred to as Repos 105 and Repos 108, partly caused the bankruptcy of Lehman Brothers. Repos 105 denoted that the assets being sold was worth 5% more than the cash received whilst Repos 108 meant the assets being sold was worth 8% more than the cash received. This could be described as overcollateralization of 5% and 8% respectively. Lehman Brothers was accused of using repos to window dress its financial statement to deceive investors, regulators and the public at large. The deceit was borne out of the fact that Lehman Brothers was using the repos to hide its high leverage during reporting times. According to Sharp (2010), Lehman Brothers had used repos to boost its balance sheet by US\$50 billion. Even though repurchase agreements were used prior to the Firm's bankruptcy, it became rampant when the downturn in the subprime mortgage market began, resulting in lack of confidence in the Firm. Between the 4<sup>th</sup> quarter of 2007 and 2<sup>nd</sup> quarter of 2008, the Firm had used U.S-originated securities worth approximately US\$36.8 billion. (De la Merced & Werdigier, 2010). The accusation of deceit and unethical behavior on the part of Lehman Brothers was due to the accounting treatment and timing of the repos transactions. Lehman Brothers treated inflows from the repos transactions as sales and used the cash to defray part of its liabilities, in the process improving its leverage. Generally, there should have been a corresponding entry in liabilities as repos inflows are forms of liability. De la Merced & Werdigier (2010) cite the Firm's own Repos 105 accounting policy indicating that Repos cannot be generally treated as sales in the United States since it is difficult for legal practitioners to provide their legal opinion on them.

However, pinning the Company down on this policy may not have been appropriate since the operational word “generally” indicated that there was a leeway in the policy that allowed the Firm to treat repos as sales. Besides, the actions of the Company was defended by the Executives and Ernst & Young, its auditors, claiming that the international accounting standard at the time supported the treatment of such transactions. Thus, Lehman Brothers took advantage of a loophole in the accounting standard to do what they thought was necessary at the time in order to win back investor confidence. The fact that The International Accounting Standards Board and Financial Accounting Standards Board (FASB) met in April 2010 to review the accounting standards for such repos transactions points to the fact that the accounting treatment of such transactions was not clearly defined at the time. The Executives and Board Members of the Firm could be faulted for the timing of most of these transactions and activities after the transactions, and this could be rightly described as unprofessional and deceitful.

Another area that Lehman Brothers erred was the misrepresentation of the disclosure of the repos transactions. What is surprising was Ernst and Young’s failure to detect the frequency of the timing of the transactions. Again, Ernst & Young should have realized that Lehman had breached the US Generally Accepted Accounting Principles (GAAP) requirement of ensuring that all significant events that are potential to a firm’s financial statements should be disclosed. The Repos 105 had significant impact on Lehman Brothers’ and therefore had to be disclosed at all times. In addition to failing to disclose, Lehman Brothers misled the public to believe that all repos transactions were treated as financing transactions and not sales. (Durden, 2010). The gross abuse of repos 105 and lack of adequate and unambiguous standard or law to guide these transactions greatly contributed to the collapse of Lehman Brothers.

Risk management policies are instrumental in the operations of financial institutions. Indeed, the ability to thoroughly formulate and implement stringent risk management policies is critical to the very existence of all financial institutions especially those involved with complex financial products. Lehman Brothers took pride in effective risk management practices with an integrated framework where market risk and credit risk were incorporated. The Company professed good tenets of risk management practices including the ability to understand and identify all risk, placing appropriate limits on all transactions and putting in place effective and efficient mitigating strategies to avoid possible loss. It is therefore surprising that the Firm could not stand in times when these risk management principles were most needed to guarantee



its operations. Lehman Brothers was consumed by the same risks it professed to manage effectively. The demise of the Firm confirms that its risk management strategies were not as robust they made investors believe. A proper analysis of the credit risk and market risk would have informed the Firm of the need to lower their commitments in subprime loans, reduce default and better position itself to be protected from huge loss. Lack of efficient and effective risk management policies also contributed to the fall of Lehman Brothers.

The news of possible bankruptcy of Lehman, stalling of takeover arrangements and the refusal of the US Government to bail out the Firm were key events that set the tone for Lehman's eventual collapse. In an efficiency market, information flow has immense impact on stock price. Stock prices quickly adjust to incorporate and reflect all relevant information. More importantly, with the advent of numerous technological information transmission media, information is easily spread like wild fire. The information that Korea Development Bank was considering the possibility of acquiring LBHI caused Lehman's price to increase by 5%. This attempt was not materialized as Korea Development Bank cited inability to have consensus with regulators and to attract a partner for the acquisition. It was rumored that Lehman Brothers rejected an offer of US\$23 per share. Whatever the case may be, the break in takeover discussions with Korea Development Bank had serious consequences on the stock price of Lehman Brothers. The gain recorded after the possible takeover was announced was completely eroded with stock price sinking by 45%. The Firm's announcement of a US\$3.9 billion loss on September 10, 2008, further slammed the price by 7%. Investor confidence continued to erode as Lehman further trembled into a destructive abyss. Unfortunately for Lehman Brothers, the British Government failed to approve the takeover of the company by Barclays Bank. Perhaps, the last resort for survival would have been a bailout by the US Government. The US Government had taken over Fannie Mae, Freddie Mac and American International Group. Similarly, Bear Stearns through an arrangement with the Government had been acquired by JP Morgan Chase. Lehman Brothers was however refused the same opportunity of a bailout by the US Government. The then CEO of Lehman Brothers complained about why a bailout opportunity was not given to save a bank of such caliber. Some U.S Officials cited lack of legal backing to rescue Lehman. The question is could they have passed an emergency legislation if the Government so desired to bailout Lehman Brothers, considering the enormity of the impact its collapse? This question is yet to be answered.

## **2.4. The Impact of the Bankruptcy**

The impact of Lehman's bankruptcy has been widely studied. Various studies have examined the effects of Lehman Brothers' bankruptcy on the performance of returns of some stock markets in the world. (Ranjeen and Sharma, 2015). Analysis on the impact of Lehman Brothers' bankruptcy on the performance of stock returns in the U.S. stock market carried out revealed that the firm's bankruptcy had a devastating effect on some of the major stock indexes. (Dumontaux and Pop 2012; Pichardo and Bacon 2009 as cited in Ranjeen and Sharma, 2015). Other studies have also assessed the effects of Lehman Brothers' bankruptcy and financial crisis on the Chinese stock market and concluded that there is generally insignificant effect. (Ranjeen and Sharma, 2015; Raddatz, 2010 as cited in Ranjeen and Sharma, 2015). In analyzing the impact of the bankruptcy of Lehman Brothers on the volatility structure of ISE-100 Price Index, Celikkol, Akkoc & Akarim (2010) observed a rise in the standard deviation and the volatility of ISE-100 index during the bankruptcy period. CNN New York (2008) revealed that the bankruptcy of Lehman Brothers was a major contributor to the worst performance of certain major market indices across the globe at the time. For instance, the New York Dow Jones Industrial Average closed 504 points down, or about 4.4%, being the largest drop by point in a single day in about seven years prior to the filing of the bankruptcy (Duncan, 2012). Similarly, NASDAQ Composite also dropped by 3.6%, being the worst single-session percentage decline since March 24, 2003. European stock market indices were not left out. The FTSE index in London fell by 3.92% whilst the Paris CAC 40 declined by 3.78%, recording the worst performance since the 2001 terrorist attack in the United States. The story in Asia was not different. Major Asian indices such as India's Sensex, Taiwan's benchmark, and Singapore's STI dropped by 5.4%, 4.1%, and 2.9% respectively. In addition, Japan's Nikkei, Hong Kong's Seng Index and South Korea's KOSPI suffered a similar fate, falling 4.9%, 5.5% and 6.1% respectively (CNN Tokyo, 2008).

Lehman Brothers had a substantial number of employees working around the world. The bankruptcy of Lehman Brothers indicated that over 25,000 employees of the Firm had lost their jobs. In addition, these employees had substantial investments in the stock of the Firm. The unprecedented fall of the Firm's stock price had a dire impact on their investments. According to Shell (n.d), estimated jobs lost as a result of the bankruptcy stood at 6 million. Economic indicators with regards employment, standard of living and purchasing power were slammed.

The bankruptcy of Lehman Brothers had tearing effects on its creditors/investors. A day after the Firm filed for bankruptcy, the price of a share or net asset value of the Reserve Primary Fund, a large money market mutual fund based in the US, fell below US\$1, a phenomenon referred to as “breaking the buck”. (Tymkiw, 2012; Macdonald, 2012). This was because the fund held US\$785 million in Lehman Brothers’ debt securities on September 14, 2008, a day before the firm filed bankruptcy (Tymkiw, 2012; Condon, 2008). The US Securities and Exchange Commission on May 5, 2009, filed a suit against Reserve Management Company Inc., its Chairman, Vice Chairman and President, and Reserve Partners, Inc., alleging their failure to provide important material facts to key stakeholders including investors, the Fund’s board of trustees, and rating agencies as Lehman Brothers filed for bankruptcy protection in September 2008. The suit was also to enforce the Fund to expedite the distribution of the Fund’s remaining assets to investors. (U.S. Securities and Exchange Commission, 2009). The former Reserve Primary Fund executives were cleared of fraud charges but Reserve Management Company, Inc., and Reserve Partners, Inc were found guilty. The court however, ordered the Fund to distribute almost all the remaining assets to investors on a pro-rata basis.

Another investor that suffered a similar fate was BNY Institutional Cash Reserves Fund, an institutional fund run by Bank of New York Mellon Corp. The BNY Mellon’s \$22 billion Institutional Cash Reserves Fund (ICRF) on September 16, 2008, also “broke the buck,” with its share price falling in value to US\$0.991 due to its holdings in LBHI. (Financial Crisis Inquiry Commission, 2011). As a result of unsecured lending of US\$35 million of its assets to LBHI. Bank of New York Mellon Corp. was hit with a lawsuit. It might have done this taking into consideration the pedigree of Lehman Brothers and thought bankruptcy of the Firm could never possible. This shows how many firms failed to fully analyze the future of Lehman Brothers, and in the process bore the brunt.

In a similar vein, Federal Home Loan Mortgage Corporation (Freddie Mac), a mortgage financier indicated that it had been greatly hit by the Lehman Brothers’ bankruptcy. As reported by Bullock (2008), Freddie Mac was yet to receive a US\$1.2 billion transaction plus interest from Lehman Brothers, in addition to a potential exposure of approximately US\$400 million in connection with the servicing of some mortgage loans. Similarly, the then President and CEO of the Federal Agricultural Mortgage Corporation (Farmer Mac), indicated during the Company’s third quarter 2008 earnings conference call that the Company would have to

write off approximately US\$52.4 million in Lehman Brothers debt as a result of the bankruptcy. (Alpha, 2008)

Numerous hedge funds that used Lehman as their prime broker and relied largely on the Company for financing had their own share of its bankruptcy. As at the time of filing for bankruptcy, Lehman Brothers had re-used over US\$22 billion assets of hedge funds to secure its trading and borrowings (Lessard, 2010). The takeover of Lehman's London business by the Administrator and filing of bankruptcy by U.S Holding Company resulted in a freeze of positions held by these hedge funds at Lehman. Further growths in these hedge funds were hampered as they were compelled to sit on huge cash balances as a result of the freezing of their assets. It is ironic why these hedge funds allowed this to happen as they could have restricted Lehman Brothers from re-using these assets for such purposes. The inability on the part of these hedge funds to do this showed their over-reliance on Lehman, and the trust and confidence they had in Lehman Brothers. However, taking investment decisions should not only be based on trust and confidence, but more importantly on a detailed analysis of the past, present and future performance of the invested business. It is also significant to note that past performance does not guarantee future performance. These hedge funds also failed to protect their investors' funds on which their very existence depended.

Lehman Brothers' bankruptcy also had severe effects on some major companies and numerous financial institutions outside United States and Europe who had dealings with the firm one way or the other. More than 75 distinct bankruptcy proceedings were recorded following the bankruptcy of Lehman Brothers (PricewaterhouseCoopers, 2009).

According to Square (2012), over 43,700 individuals in Hong Kong had invested HK\$15.7 billion in mini-bonds from Lehman Brothers. As a result of the bankruptcy, banks and insurers in Japan were expected to make potential losses of 249 billion yen, approximately US\$2.4 billion (Square, 2012).

The events leading to the filling of bankruptcy as well as the announcement of filling were expected to create panic in the mortgage market. With about US\$4.3 billion in mortgage securities, the thought of liquidating such a huge asset base sparked a selloff in commercial mortgage-backed securities. This was likely to have dire consequences on the prices of these securities and underlying assets.

The impact of Lehman Brothers' bankruptcy was significant enough to stimulate the need to implement more robust risk management systems, and the intensity of scrutinizing financial intermediaries. Market players, especially large and complex financial institutions, continue to address the challenges of accurately addressing market, credit, and liquidity risks. The bankruptcy of Lehman Brothers also partly contributed to the introduction of Basel III to make financial institutions more resilient to financial stress.

## **2.5. Preventive Measures**

It has been well established that the bankruptcy of Lehman Brothers had explosive impact on the international financial system. It continues to haunt many investors, and investor confidence has since not been totally restored. Could this financial nightmare have been prevented?

The answer is yes. One key preventive measure would have been the existence of robust risk management policies and strategies, and the personnel to drive its implementation. It is obvious that the Firm failed to clearly identify the risks inherited in the subprime mortgage market, set limits of exposure, constantly monitor those risks, and take pragmatic measures to reduce exposure where necessary. It is alarming how Lehman Brothers with several years of experience in complex financial transactions could ignore these key elements in efficient and effective risk management.

Again, Lehman Brothers' bankruptcy could have been prevented if officials of the Firm had been more responsible and ethically behaved. The excessive use of Repos 105, the timing of the transactions and misrepresentation of its treatment hid very vital information investors needed to make investment decisions. If investors had been aware earlier, the impact of the loss would have been minimal. This is premised on the fact that, investors and regulators would have been aware of the threatening leverage position and would have compelled the Company's officials to check it accordingly.

More effective and constant monitoring by regulatory bodies could have also prevented Lehman Brothers' bankruptcy. The firm was said to have increased its Repos 105 transactions few days prior to the reporting period and borrowed to buy back immediately after the reporting period. A critical audit of quarterly financial statements could have revealed the unethical

treatments of Repos 105 and the quality of the Firm's mortgage portfolio. The inability of the regulatory bodies to detect these indicated that proper auditing was not done.

Lehman Brother's bankruptcy could also have been avoided if the Firm had limited its exposure to subprime mortgage loans. The impact of the subprime mortgage portfolio was too devastating when house prices began to fall coupled with high default rate as a result of the increasing interest rate. The Firm either underestimated the threat a possible slam in housing price could pose to its existence, or were simply overtaken by events.

Clearly, the acquisition of the Firm by financially sound organizations such as Barclays Bank, or a bailout by the US Government would have been the lifeline for Lehman Brothers.

### **3. Conclusions and Recommendations**

The failure of Lehman Brothers had devastating effects on the international banking system and the financial system at large. Huge sums of funds were lost by companies and individuals as a result of their investments in Lehman Brothers and their related businesses. While the event eroded investor confidence, well noted, internationally acclaimed stock markets were adversely affected across the globe. Top executives of Lehman Brothers at the time were partly blamed for the fate of the Company due to decisions taken. Analysis of the events leading to the collapse of the firm and post-bankruptcy exposed weaknesses in the risk management implementation strategies of the Firm, and the accounting standard guiding the accounting treatments of repurchase agreement transactions. It also revealed the weaknesses in the monitoring and supervision of regulatory bodies as like investors could not foresee this tragedy coming. Regulatory bodies displayed a lack of capacity in effectively auditing the financial statements of Lehman Brothers. Furthermore, the legal framework for rescuing companies in financial distress such as Lehman Brothers was not available. The bankruptcy of Lehman Brothers also brought into question the analytical capabilities of those hedge funds that invested heavily in Lehman Brothers.

Lessons abound in Lehman Brothers' collapse. The first lesson is that a small bubble can bust just as a big one can, and to be "financially scientific", a big ball and a small ball will reach the ground at the same time when dropped at the same time in a space. This is because mass has no effect on the acceleration of an object in a free fall in a space. Big companies have the potential to fail just like small companies if the right structures are not put in place and

implemented. Secondly, the negative effects of a failed big firm are many folds of that of a failed small firm. Thirdly, relying wholly on an audited accounts of a company in taking investment decisions could be very suicidal. The collapse of Lehman Brothers and the financial turmoil in 2008 at large, exposed serious weaknesses in the Basel II. Risks inherent in certain banking activities such as securitizations, trading and exposure to off-balance sheet were completely ignored under Basel II. This realization provoked the need for Basel III to ensure such risks are incorporated in minimum capital requirement, risk management practices and public disclosures.

Based on the conclusions and lessons learnt, it is recommended that regulatory bodies be adequately resourced in terms of personnel and logistics to ensure effective and efficient monitoring and supervision. Personnel of such bodies should be properly trained to be able to identify and understand the intricacies involved in all products and services offered by financial institutions within their jurisdiction. Understanding the rudiments of accounting, preparation and analysis of financial statements, as well as auditing would enable regulators to detect wrong doing on the part of financial institutions. In addition, more attention should be given to the operations of huge financial conglomerates in terms of supervision and monitoring since the impact of their failure can be detrimental to the larger financial system.

It is also recommended that measures are put in place to ensure banks would be able to sustain themselves during such situations. An appreciable buffer in terms of cash and near cash assets to mitigate liquidity risk and maintenance of appropriate capital adequacy ratio to mitigate leverage risk. The Basel Committee on Banking Supervision's introduction of Basel III in 2009 is in right direction since the accord appreciates the need for a more robust way of dealing with certain risk categories such as market risk, liquidity and leverage risk. However, the implementation of Basel III like the previous accords is placed at the door steps of national regulatory bodies. The Basel Committee has no control over the policy space available to countries relative to Basel III Implementation. There is hardly any clear and effective mechanisms in place for the Committee to ensure that national regulatory bodies comply with banking policies and in turn compel the financial institutions under their jurisdiction to also comply. The need for such mechanisms for monitoring and supervision is therefore highly recommended.

Last but not least, there is the need for strong corporate governance structures if the Lehman Brothers financial disaster is to be avoided. If the corporate governance structures of Lehman Brothers were strong enough, certain actions of top executives of the Firm could have been checked by its Board of Directors. It seems that the Board of the Firm put more emphasis on maximizing returns without realizing that risks and returns are directly related. A strong corporate governance structure provides for a Board that works through Board Committees relating to key areas of the organization including risk management, auditing, operations, human resources etc.

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